

imajbox® 3

TECHNICAL SPECIFICATIONS

IMAJBOX® 3TX+

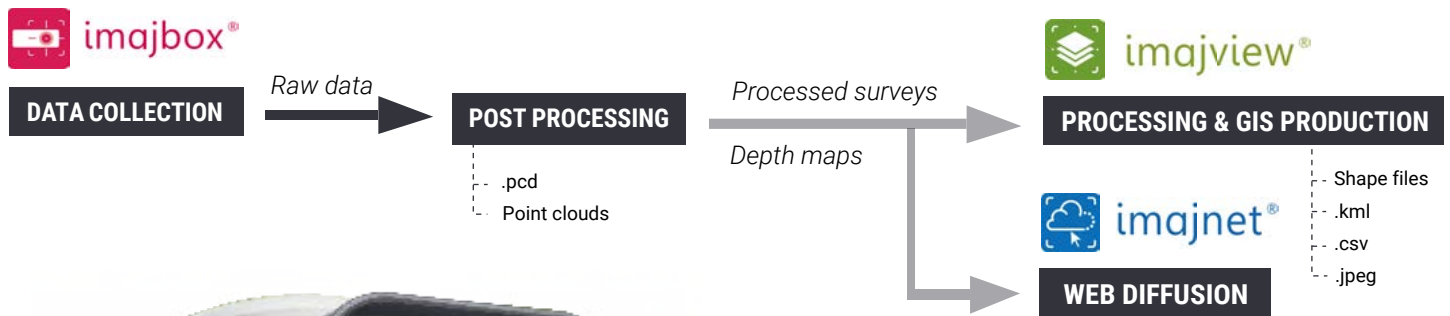
THE MOST ADVANCED IMAJBOX® OF THE RANGE

Portable mobile mapping system designed to survey linear infrastructures from any vehicle.

A versatile tool

Mounted on cars, trucks, trains or boats, imajbox® can survey from a few to thousands of kilometers.

Punctual, recurrent or nationwide projects, imajbox® is the perfect tool to survey a network, thus having up-to-date data.



A response to many issues:

- GIS and mapping
- Infrastructure assessment
- Engineering studies
- Linear Referencing System
- Maintenance management
- Work control
- Planning and budgeting
- Monitoring...



ACCURATE

Proprietary algorithms to process sensors' raw data for the continuous and accurate spatial positioning.



SIMPLE

Independent, all-in-one, standalone and autocalibrated. No wiring required.



PRODUCTIVE

High speed survey for a large scale data collection.



CONNECTED

Controlled by WiFi and connectors for external sensors integration.



ADJUSTABLE

Easily mounted in every orientations with the tripod's suction pads.

imajbox® 3 TX+

GNSS RECEIVER

448 channels for simultaneous tracking of all visible satellites

GPS: L1, L2, L5

GLONASS: L1, L2, L3

Galileo: E1, E5a, E5b, AltBoc

BeiDou: B1, B2

SBAS: EGNOS, WAAS, GAGAN, MSAS, SDCM (L1, L5)

QZSS: L1, L2, L5

Integrated dual channel L-Band receiver

Supported real time modes:

Standalone, SBAS, dGNSS*, RTK*, PPP**(Terrastar)

Supported post processed modes:

Kinematic (Rinex)

MODE	HORIZONTAL ACCURACY (RMS)	VERTICAL ACCURACY (RMS)
Standalone	1,2m	1,9m
SBAS	0,6m	0,8m
dGNSS	0,4m	0,7m
PPP	4cm	6cm
RTK	0,6cm + 0,5ppm	1cm + 1ppm

*requires streaming of NTRIP frames for base stations corrections via WiFi.

**requires TerrastarD subscription.

Time to first fix:

Cold start < 45s

Warm start < 20s

ANTENNA

Integrated RTK grade L1/L2/L5 GPS/GLONASS/GALILEO/BEIDOU antenna

Connector for external antenna (SMA)

Auto-switch to an external antenna

Patch antenna for external use:

GPS/GLONASS L1/L2 patch antenna

Interface for lever arm input

IMU

DX4 inertial movement unit 6 axis

Gyroscopes:

Dynamic range: $\pm 480^\circ/\text{s}$

In-run bias stability: $6.25^\circ/\text{hr}$

Angular random walk: $0.3/\sqrt{\text{hr}}$

Accelerometers:

Dynamic range: $\pm 18\text{g}$

In-run bias stability: 0.1mg

Velocity random walk: $0.029\text{m}/\text{sec}/\sqrt{\text{hr}}$

IMAGE SENSOR

Sensor

Single CMOS Global Shutter 8,9MP

Resolution

Standard: 4096×2160 pixels

Cropped for high speed: 2200×2160 pixels

Auto-trigger

Inter distance of image acquisition configurable (from 0,5m to 10m)

Maximum Frame rate

10fps (full resolution)

17fps (high speed mode)

Ultra-fast auto-exposure

3 zones presets

Optimized debayering

OPTICS

Fixed focus multi-lens

Deep depth of field

Sharp from 0,5 to 100m from camera

HFoV

100°

STORAGE

Internal SSD

128 GB (512 GB optional)

Support for real time external storage via USB3 (Pendrive, HDD, SSD)

Data management interface

for copying from internal SSD to USB

Support for Ethernet

SAMBA share for accessing internal SSD directly

CONNECTIVITY

USB 3

Ethernet

Wi-Fi host (for web remote control)

Wi-Fi client (for corrections)

SOFTWARE

imajbox® is delivered with Post processing software for Windows X64:

imaging browser

imaging 3D Pro

Kinematic post processing module

imaging InertialVision fusion algorithms

OPERATIONAL LIMITS

Survey speed

0 to 180 km/h

Up to 306 km/h with high speed mode

Temperature

-10°C to 40°C

Protection level

IP 65

HARDWARE

Dimensions

Height: 175 mm

Length: 165 mm

Width: 145 mm

Weight

2 kg

Power supply

12V / 3A

Internal battery for 3h standalone survey

Package

1 unit delivered in a small fly case

3 suction pads

1 USB Pendrive 128GB

1 external patch antenna (L1/L2)

Security strap

Cigarette lighter power supply cable

AC/DC converter 110/240V 12V 3A